May 2004

Leading Edge

Air Force Materiel Command

Commander's Log: 2004

May 2004
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LEADING EDGE

Headquarters
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Wright-Patterson Air Force Base, Ohio

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new structure, new look, new name

The May issue of Leading Edge is a compendium of information about Air Force Materiel Command bases, people and functions. We have always called it our Almanac issue.

AFMC is restructuring to better reflect its alignment with the other Air Force major commands, so we analyzed this issue's name to see if we could find one more fitting.

Of all the names considered, two definitions of "log" best describe the May issue's contents: "A record of a vehicle's performance, as the flight record of an aircraft;" and "A record … as the progress of an undertaking."

Thus, Commander's Log: 2004.

— John Klemack, Chief, Command Communication Division, AFMC Public Affairs

mission focus

bases at a glance

specialized units

air force materiel command

mission at a glance

Gen. Gregory S. Martin is the commander of Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio. General Martin is a command pilot with more than 4,100 flying hours in various aircraft, including the AT-38, F-4, F-15 and C-20. A native of Fort Myer, Va., General Martin graduated from the U.S. Air Force Academy with a bachelor of science degree and also has a master's degree in business management from Central Michigan University. In addition to flying 161 combat missions in Southeast Asia, he commanded the 67th Tactical Fighter Squadron, the 479th Tactical Training Wing, and the 33rd and 1st fighter wings. He also served as the Joint Staff's J-8 vice director and the Air Force's director of Operational Requirements. Before assuming his current position, he was commander, U.S. Air Forces in Europe; commander, Allied Air Forces Northern Europe; and Air Force Component commander, U.S. European Command, Ramstein Air Base, Germany.

Lt. Gen. Richard V. Reynolds is the vice commander of Air Force Materiel Command. He is a command pilot with more than 4,000 flying hours in 60 types of aircraft. A graduate of the U.S. Air Force Academy, General Reynolds has served as a pilot training instructor, combat-ready bomber air crew commander and experimental test pilot. He also commanded the 4952nd Test Squadron and has served as program director for several strategic and tactical aircraft acquisition programs, including the B-2 Spirit. General Reynolds was the Air Force program executive officer for Airlift and Trainers at the Pentagon, commanded the Air Force Flight Test Center at Edwards AFB, Calif., and, prior to his current position, was the commander of the Aeronautical Systems Center, Wright-Patterson AFB.

Dr. J. Daniel "Dan" Stewart, a member of the Senior Executive Service, is the executive director of Air Force Materiel Command. He advises the commander in managing all aspects of the command's mission, which involves planning, managing and conducting research, development, testing, acquisition and sustainment activities to advance the state of the art and support of all systems, subsystems and components across the Air Force. A Stanford University Sloan Fellow, Dr. Stewart entered federal service as a technology manager with the Air Force Rocket Propulsion Laboratory at Edwards AFB. Prior to that he served seven years with The Aerospace Corp., providing systems engineering support to the Air Force's Space and Ballistic Missile Organization. Prior to assuming his present duties, he served as the executive director for the Air Armament Center, Eglin AFB, Fla.

Chief Master Sgt. Vickie C. Mauldin is the command chief master sergeant of Air Force Materiel Command. Chief Mauldin advises the AFMC commander on the welfare, effective utilization, education and progress of the command's nearly 20,000 enlisted Airmen. Chief Maudlin has served in numerous commands as an avionics technician, instructor, and manager at squadron and group levels. Her career highlights include instructor award and honor graduate from the 27th Fighter Wing Noncommissioned Officer Leadership Course, and distinguished graduate from both the Air Training Command NCO Academy and the Senior NCO Academy. She was also selected as the 8th Fighter Wing Maintenance Professional of the Year for 1992, Kunsan Air Base, Republic of Korea. Prior to her current assignment, Chief Mauldin was the command chief master sergeant for Headquarters Third Air Force and U.S. Air Forces in Europe.

Around the command

☆☆☆☆ Gen. Gregory S. Martin

It's tough to transform without changing

The men and women of Air Force Materiel Command are experiencing the most extensive transformation to occur in the command's 12-year history, perhaps even more significant changes than those required when Air Force Logistics Command and Air Force Systems Command merged to form AFMC.

But one thing is certain as we chart our future — it's tough to transform … without changing!

After all, we have been dominant in five major conflicts — operations Desert Storm, Deliberate Force, Allied Force, Enduring Freedom and Iraqi Freedom — in the past 13 years. Our forces dominated in large measure because of the decisive effects of this nation's air and space power. That air and space power came from the people of AFMC who provided war-winning technology, acquisition support and sustainment to the warfighter.

So, if ain't broke, why fix it?

The answer is simple: the dedicated Airmen and Air Force civilians of our command do not receive the respect and appreciation they deserve for the outstanding work they do. It is up to leadership to figure out why that is and fix it!

The entire Air Force rides on the backs of our people and yet, often, they feel like outcasts. Why? I believe it's because we are often perceived to be late to deliver, over budget, and not relevant in fielding new technologies — some of which are out of date when finally delivered.

True or not, that is the way we are perceived by many of our contemporaries. We can continue to live with that perception by trying to explain that "we're different," while fighting from the bottom up to preserve our funding, manpower and relevance. Or we can consider the reality of our Air Force's vector and transform ourselves accordingly.

"If the people we deal with daily can understand us better, our value to the warfighters can do nothing but increase."

— Gen. Gregory S. Martin
AFMC commander

When I came into this command, I tried to understand our headquarters structure, our field organizations and our work units. I tried to relate them to my experiences as I have grown up in our Air Force. It became apparent that we had not chosen organizational, programmatic, financial, accounting or personnel models consistent with the rest of the Air Force or appropriate to the "business environment" we live in, versus the "business world" we thought we resembled. We were trying to act like a business, but the environment in which we operate does not conform to the business world. The result in some instances was confusion, frustration and conflict.

We are a military organization and we are bound by the rules and directives that support our national security. National security is our purpose for being. We can conduct ourselves in a "business-like" manner, but don't be confused; we are a military organization, not a business.

We cannot think of ourselves as different from the rest of our comrades-in-arms. We are a critical part of the United States Air Force, and we are structuring ourselves with that mindset. It is true that we may have some different missions or rules to deal with, but our basic structure and the basic processes we use to accomplish our missions need to be consistent with the rest of our Air Force.

I recall the days when our fighter squadrons couldn't fly a schedule with less than 50 percent deviation every day. Today, however, they have few deviations, day after day. Sortie rates went up because commanders changed their organizations into product-oriented, resource-earning, goal-driven units with clear metrics to guide their decisions. The time has come for similar change in AFMC.

Our change began last October when the program executive officer location was moved from Washington D.C. to our centers.

The whole purpose of the PEO restructure was to reconnect the AFMC people and infrastructure with the acquisition community and harness the value of our people and infrastructure to facilitate successful program execution — to me that means relevant systems, on time and on cost. The PEO restructure is undoubtedly the driving force — the foundation behind AFMC's transformation.

The PEO restructure was the right thing to do and it will improve our ability to accomplish our mission. But to further the transformation, Headquarters AFMC and our center staffs have to accurately determine the right size of our "work units" — wings, groups, squadrons — first at our product centers with similar structures to be developed for our logistics and test centers.

Our success is dependent on defining and implementing the right training, the right processes, the right tools and the right metrics to ensure that all concerned know how they are doing in producing and delivering relevant systems on time and on cost, every time.

Our work units will be structured in a way that the people assigned to each organization will be directly accountable to their unit commander or director.

And like it or not, when dealing with billions of taxpayers dollars, as we do, the single most identifiable measure of our performance is cost. There are all kinds of excuses for program cost growth, but in the end, if you don't use attrition-based planning to determine the schedule and cost, if you don't know the incremental value and cost of the people assigned to a project with regard to the total program cost — and account for it, you will always be over budget.

We must turn our organizations, work units and offices into resource earning units. We must know what our people cost, how many it will take to do the job based the amount of work they can produce per hour — and with attrition-based planning factored in — know how many of those hours it will take to complete the job.

Without this very basic approach we can't build a reliable schedule and expect our customers and Headquarters Air Force to provide us the resources necessary to maintain the heartbeat of AFMC.

Once fully transformed, AFMC will be positioned for better customer focus. Recent history shows that even if the cost for a given system is more than anticipated, the warfighting customer doesn't seem to complain because in the partnership relationship, trust and confidence help provide realistic expectations with a better understanding of risks.

Under our new operating structure, we will have more connectivity to the "external factor" — agencies and individuals that have influence over what we do.

It is incumbent upon us to make it easier for Congress, the private sector science and technology community, other commands, the Air Force acquisition community, our employees' union, Headquarters Air Force, and other entities outside AFMC to understand and relate to what we do.

If the people we deal with daily can understand us better, our value to the warfighters can do nothing but increase.

Again, it's tough to transform without changing. But we must transform if we expect the men and women of AFMC to continue to deliver war-winning capabilities on time and on cost while at the same time receiving the credit they deserve for the great job they do every single day.

According to Gen. Gregory S. Martin, AFMC commander, the command's change began when the program executive officer location was moved from Washington D.C. to AFMC centers. The whole purpose of the PEO restructure was to reconnect AFMC people and infrastructure with the acquisition community, General Martin said. AFMC is currently supporting SAF/AQ by fielding the F/A-22 Raptor, shown here during a recent test flight at Edwards AFB, Calif., home of the Air Force Flight Test Center. (AF photo)

Technology

E-3 Sentry

Delivering war-winning capabilities on time, on cost.

Air Force Materiel Command

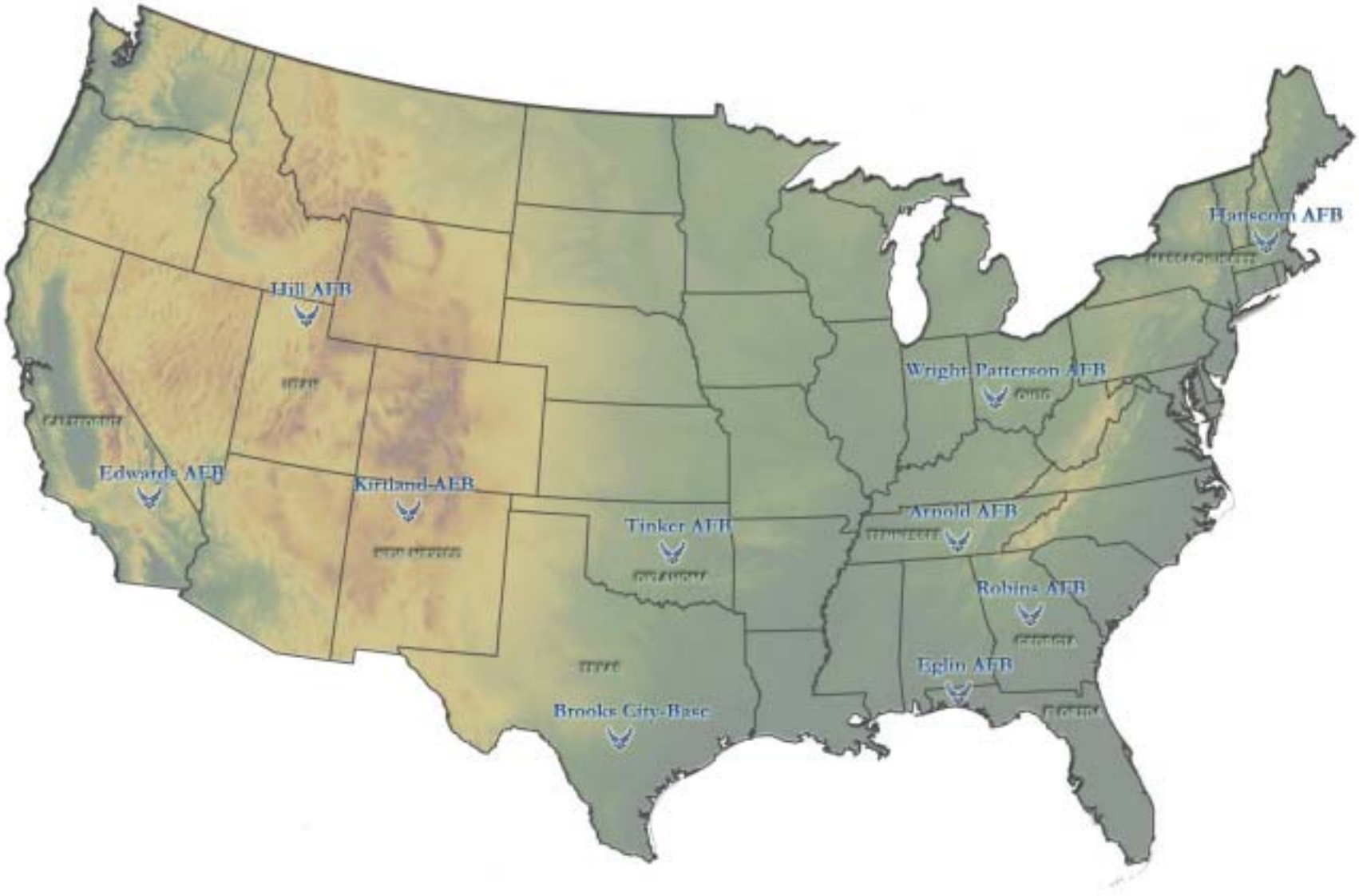
F/A-22 Raptors

Acquisition Support

Sustainment

C-17 Globemaster

Major Active Duty AFMC Bases



Arnold Air Force Base, Tenn.

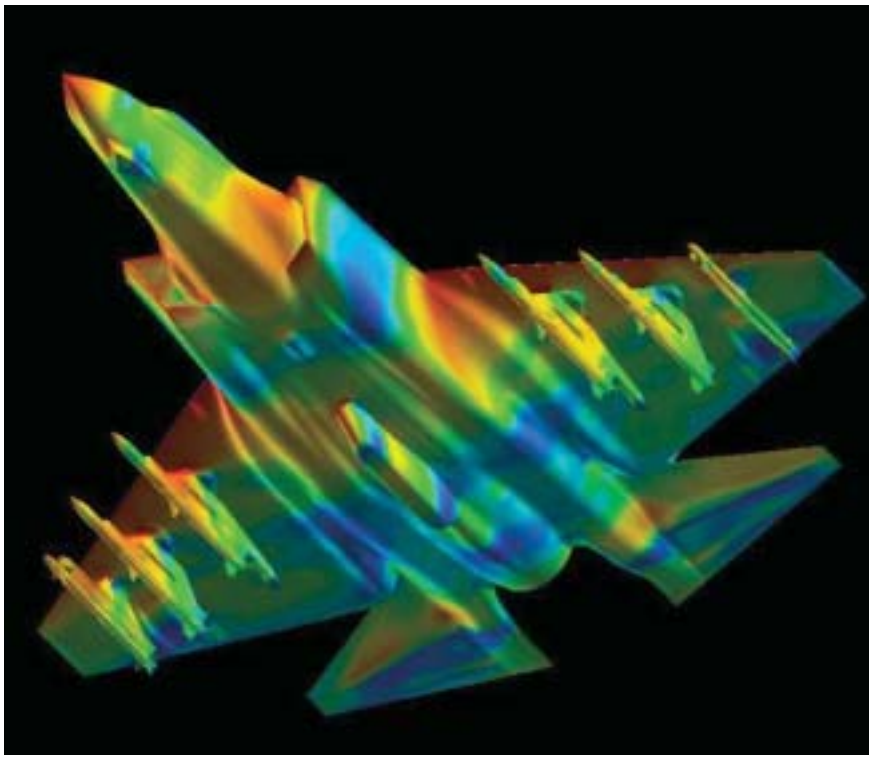
Host unit
Arnold Engineering Development Center

Mission
To provide customers with the world's largest array of aerospace ground-based test and evaluation facilities and capabilities. Ensure test facilities, technologies and knowledge fully support today's and tomorrow's warfighters, while providing customers critical insights through partnership and excellence.

Responsibilities
As the Defense Department's largest aerospace ground test and evaluation complex, AEDC scientists and engineers perform tests, engineering analysis and technical evaluations for research, system development and operational programs for all the U.S. armed forces, other government agencies and commercial aerospace industry. The center has tested some component of virtually every high-performance aerospace system in the Defence Department’s inventory and most space vehicles.

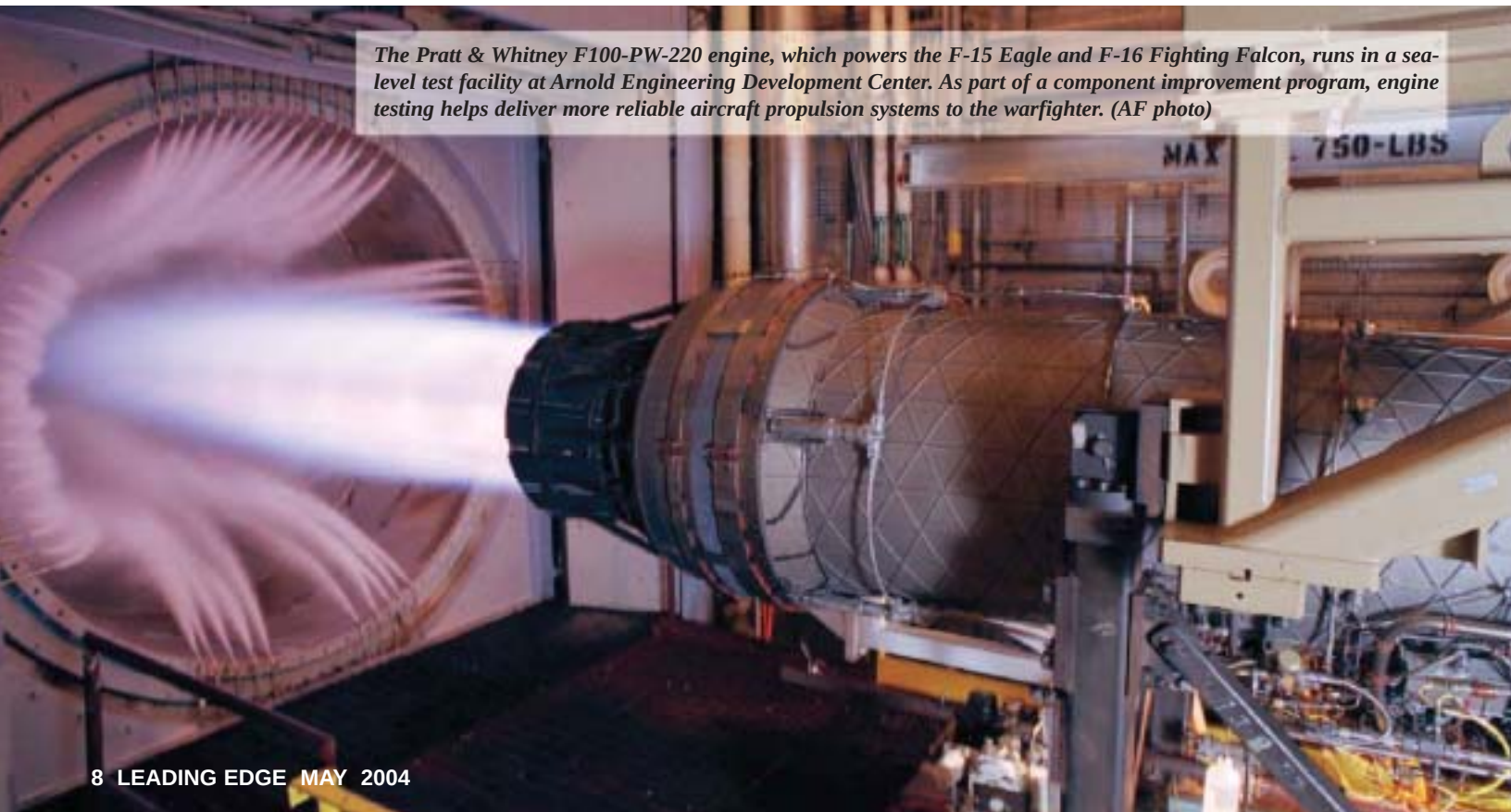
Budget
$323 million

Additional tenants
Geographically separated unit:
Hypervelocity Tunnel 9, White Oak, Md.



A computational fluid dynamics (CFD) computer analysis of the F-35 Joint Strike Fighter with wing mounted weapons. CFD solutions show airflow over wind tunnel test articles or through an engine. CFD is helping to reduce development costs and test time to get new weapon systems and aircraft weapons delivery certifications to the warfighters faster. (AF photo)

Contact information
Visit www.arnold.af.mil or call 931-454-3000 or DSN 340-5011



The Pratt & Whitney F100-PW-220 engine, which powers the F-15 Eagle and F-16 Fighting Falcon, runs in a sea-level test facility at Arnold Engineering Development Center. As part of a component improvement program, engine testing helps deliver more reliable aircraft propulsion systems to the warfighter. (AF photo)

Brooks City-Base, Texas

Host unit
311th Human Systems Wing

Mission
Develop combat power and efficiency through the many facets of aerospace medicine. Support the air expeditionary warrior through enhanced aerospace medicine knowledge, technology and Human Systems Integration, thereby unleashing human performance to maximize air and space power.

Responsibilities
As the world's only aerospace medicine wing, the 311th HSW produces tools and systems to assess and manage health, safety and environmental risks for the Air Force and Defense Department. Wing members train more than 6,000 aeromedical personnel annually; and handle more than 140 technical acquisition and sustainment programs, including force health protection, direct mission support, and education and training. The 311th HSW's elements include Air Force Institute for Operational Health, the Human Systems Program Office, the USAF School of Aerospace Medicine and the 311th Mission Support Group.

Brooks Air Force Base became the Brooks City-Base Technology Park in 2002 with the Air Force as the anchor tenant. The Brooks Development Authority operates the city-base and provides planning, marketing and management to stimulate private sector economic development with a wide range of economic incentives. The base provides municipal and related services. This unique approach strengthens corporate and academic partnerships while significantly reducing the wing's operating costs.

Budget
$492 million

Additional tenants
Air Force Medical Support Agency
Air Force Audit Agency
Air Force Research Laboratory
Air Force Center for Environmental Excellence
Air Force Outreach Program Office
68th Information Operations Squadron
U.S. Army Medical Research Detachment

Contact information
Visit www.brooks.af.mil or call 210-536-1110 or (DSN) 240-1110

Students at the 311th Human Systems Wing's USAF School of Aerospace Medicine receive and stabilize multiple critically injured patients while training in the Expeditionary Medical Support facility at Brooks City-Base. (AF photo)

Edwards Air Force Base, Calif.

Host unit
95th Air Base Wing

Primary AFMC tenant
Air Force Flight Test Center

Mission
The Air Force Flight Test Center is the AFMC center of excellence for researching, developing, testing and evaluating aerospace systems for the United States and its allies. It operates the U.S. Air Force Test Pilot School and is home to NASA's Dryden Research Center and to considerable test activity from America's commercial aerospace industry. From developing the country's first jet aircraft to the Air Force's newest fighter, the F/A-22 Raptor, Edwards AFB test forces have played a role in virtually every aircraft to enter the Air Force inventory since World War II. This combat support establishes the flight test center's direct and tangible link to the warfighter.

Responsibilities
AFFTC experts make sure current and future Airmen have proven equipment to accomplish their mission. When necessary, test forces deploy and operate developmental test aircraft and systems to support combat missions. Center experts contribute to U.S. fighting forces via test and evaluation which influences weapon systems design to make sure they meet operational war-fighting, combat support or training requirements.

AFFTC operates the Edwards AFB Flight Test Range — 20,000 square miles of airspace, including three supersonic corridors and four aircraft spin areas.

Edwards AFB has an array of ground test facilities. The Avionics and Test and Integration Complex, which includes the Benefield Anechoic Facility, allows complete testing on a fully integrated avionics suite in a simulated flight environment, including electronic threats and computer software checkout.

In February 2004, the F/A-22 Raptor reached 5,000 flight hours at Edwards AFB, Calif. In the first two years of flight tests, the Raptor has met or exceeded every key flight performance parameter. (AF photo)

Weapon systems
B-1B, B-2, B-52G/H, F/A-22A, F-15A/B/C/D/E, F-16A/B/C/D, F-16(VISTA), A/T-38A/B/C, C-17A, C-12C, C-135C/E, NKC-135B/E/R, T-39A/B, F-117A, Global Hawk UAV and the YAL-1A (Airborne Laser).

Budget
$718 million

Additional tenants
412th Test Wing
Dryden Flight Research Center (NASA)
Air Force Research Laboratory's Propulsion Directorate
Air Force Operational Test and Evaluation Center, Detachment's 5 and 6
U.S. Air Force Test Pilot School
31st Test and Evaluation Squadron (ACC)
Marine Aircraft Group 46, Detachment Bravo

Contact information
www.edwards.af.mil or call 661-227-1110

Eglin Air Force Base, Fla.

Host unit
96th Air Base Wing

Primary AFMC tenant
Air Armament Center

Mission
Air Armament Center experts develop, acquire and test deployment and agile combat support of all air-delivered munitions.

Responsibilities
The center serves as the focal point for all Air Force armament. It applies advanced technology, engineering and programming efficiencies across the product life cycle to provide superior combat capability to the warfighter. The center plans, directs tests and evaluates armament, navigation, guidance systems and command and control systems. The center also supports the largest single-base mobility commitment in the Air Force. It also operates at Kirtland AFB, N.M.

Weapon systems
Air Armament Center is home to more than 40 weapon systems, including: the Advanced Medium Range Air-to-Air Missile; EGBU-15, an enhanced model of the GBU-15; GBU-28; CBU-97/B Sensor Fuzed Weapon; Joint Direct Attack Munition; Massive Ordnance Air Blast; Joint Air-to-Surface Standoff Missile; and Small Diameter Bomb.

Budget
$6.9 billion

The Sensor Fuzed Weapon devastates a tank array during a test on an Eglin AFB range. In April 2003, the weapon was used for the first time in combat against a large Iraqi tank force that was threatening U.S. Marines. The SFW is part of Air Armament Center's Area Attack Program Office. (AF photo)

Additional tenants
33rd Fighter Wing
919th Special Operations Wing
Navy's Explosive Ordnance Disposal School
53rd Wing
Air Force Research Laboratory Munitions Directorate
Army's Camp James E. Rudder Ranger Training Site

Contact information
www.eglin.af.mil or call 850-882-1110 or DSN 872-1110

An advanced medium-range air-to-air missile was launched from a Navy F/A-18D at 15,000 feet altitude during a test of munition capabilities. The AMRAAM is part of the Air Armament Center's Counter Air Program Office. (AF photo)

Hanscom Air Force Base, Mass.

Host unit
66th Air Base Wing

Primary AFMC tenant
Electronic Systems Center

Mission
Electronic Systems Center is a world leader in developing and acquiring command and control systems.

Responsibilities
ESC experts are constantly upgrading systems to make sure they remain state-of-the-art. Testing and experimentation occur throughout development. This helps ESC move the Air Force toward a fully integrated and seamlessly interoperable command and control network, giving American and allied warfighters the right information at the right time so they can manage resources and defeat the enemy.

Staff Sgt. Shane Oesterie helps replace a windshield on a NATO E-3A Sentry airborne warning and control system aircraft. Managing more than 200 programs, the Electronic Systems Center develops and acquires command and control systems like the AWACS. (AF photo by Tech. Sgt. Keith Brown)

Weapon systems
ESC manages more than 200 programs, including the joint tactical radio system, Air Force Portal, air operations centers, tactical automated security system, AWACS, combat intelligence system, E-10, JSTARS, the distributed common ground system, core automated maintenance system/reliability and maintainability information system, integrated management communications contracts, joint surveillance system, MILSATCOM terminal programs, multi-media automated system, multi-mission advanced tactical terminal and the theater battle management core system.

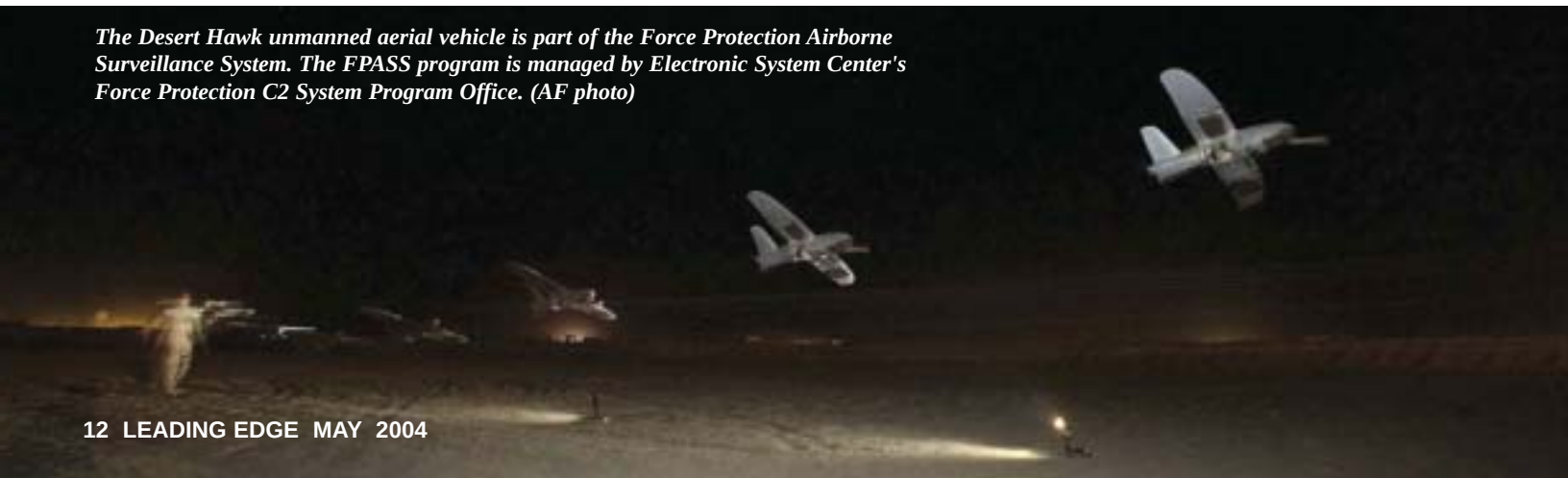
Budget
$3.2 billion

Additional tenants
Massachusetts Institute of Technology Lincoln Laboratory
Air Force Research Laboratory Space Vehicles and Sensors Directorates

Geographically separated units include:

38th Engineering Installation Group, Tinker AFB, Okla.
ESC Detachment 5, Peterson AFB, Colo.
Standard System Group, Gunter Annex-Maxwell AFB, Ala.
Cryptologic System Group at Hanscom AFB, Mass.
Materiel Systems Group, Wright-Patterson AFB, Ohio

Contact information
www.hanscom.af.mil or call 781-377-4441 or DSN 478-5980



The Desert Hawk unmanned aerial vehicle is part of the Force Protection Airborne Surveillance System. The FPASS program is managed by Electronic System Center's Force Protection C2 System Program Office. (AF photo)

Hill Air Force Base, Utah

Host unit
75th Air Base Wing

Primary AFMC tenant
Ogden Air Logistics Center

Mission
Ogden Air Logistics Center supplies the warfighter with a broad range of products in a timely manner. More than 500 aircraft and 62,500 end items are produced annually.

Responsibilities
The center has worldwide logistics management and maintenance support responsibilities for some of the Air Force's most sophisticated weapon systems, including providing program management and maintenance for the F-16 Fighting Falcon and A-10 Thunderbolt.

In addition, the center maintains the C-130 Hercules for the Air Force, Navy, Marines and foreign military and is responsible for the program management of the KC-135 Stratotanker workload through a partnering agreement with the Boeing Aerospace Support Center in San Antonio, Texas.

Ogden ALC has responsibilities for Air Force-wide item management, depot-level overhaul and repair for all types of landing gear, wheels, brakes and tires, and is the logistics manager for all conventional air munitions, solid propellants and explosive devices used throughout the Air Force.

The center has a premier capacity for software development, test, maintenance and consultation. Ogden provides photonics imaging and reconnaissance equipment; aircraft and missile crew training devices; avionics; hydraulic, pneudraulics and radar components; instruments; gas turbine engines; power equipment systems; special purpose vehicles; shelters; and software engineering, development and support.

Weapon systems
F-16, C-130A, A-10, B-2, KC-135, T-38, T-37 and 22 other actively flying mature and proven weapon systems, including the Minuteman III ICBM. The center is the leading provider of rocket motors, small missiles, air munitions and guided bombs and serves as the ammunition control point for the Air Force.

Budget
$7 billion

Additional tenants
388th Fighter Wing
419th Fighter Wing
37 other associate units

Contact Information
www.hill.af.mil or call 801-777-1110 or DSN 777-1110

Everything that goes up must come down, and the Air Force's aerial warfighter fleet lands on wheel and brake systems maintained by Ogden ALC, Hill AFB, Utah. (AF photo)

The Ogden ALC supplies global support to America's friends in freedom as F-16 Fighting Falcons brought to the maintenance directorate from Davis-Monthan AFB, Ariz., to be repaired and upgraded for the Royal Thai Air Force line up for the trans-Pacific flight home. (AF photo)

Kirtland Air Force Base, N.M.

During a training exercise, members of the Emergency Services Team approach an empty base house in a stack to ensure 360-degree protection. The EST is a team of cops trained for high-threat situations on Air Force bases; it can be compared to a basic SWAT (special weapons and tactics) team. (AF photo)

Host Unit
377th Air Base Wing

Mission
To provide world-class munitions maintenance, readiness and base operating support.

Responsibilities
The 377th ABW operates both of the Air Force's critical asset depots in the United States. It supports 76 federal government and 384 private sector tenants and associates. As a unit of the Air Armament Center, Eglin AFB, Fla., the 377th supplies several hundred fully trained people for worldwide contingencies. The wing provides security, legal, medical, fire response, personnel management, facility and utility management, housing, food service, chapel service, recreational, supply, airfield management and a myriad of community support activities for active-duty, retired and civilian employees.

Budget
$269 million

Additional tenants and associate units
Air Force Research Laboratory's Directed Energy and Space Vehicle Directorates;
Sandia National Laboratories;
Defense Threat Reduction Agency;
Air Force Inspection Agency;
Headquarters Air Force Safety Center;
Air Force Operational Test and Evaluation Center;
Department of Energy's Albuquerque Operations Office;
Space and Missile System Center, Test and Evaluation;
Airborne Laser System Office;
Theater Aerospace Command and Control Simulation Facility;
150th Fighter Wing; and the
58th Special Operations Wing.

Contact information
www.kirtland.af.mil or call 505-846-0011 or DSN 246-0011

Robins Air Force Base, Ga.

A C-5 Galaxy undergoes depot maintenance at Warner Robins Air Logistics Center. (AF photo by Sue Sapp)

Host unit
78th Air Base Wing

Primary AFMC tenant
Warner Robins Air Logistics Center

Mission
Provide combat-ready weapon systems, equipment, services and support personnel for the Air Force. Our people deliver best value sustainment and contingency response for U.S. and allied warfighters through world-class cradle-to-grave management, maintenance and combat support.

Responsibilities
As one of three Air Force air logistics centers, WR-ALC has worldwide management and engineering responsibility for repairing, modifying and overhauling the F-15 Eagle, the C-130 Hercules, the C-5 Galaxy and all Air Force helicopters. The center also provides logistical support for all Air Force missiles, vehicles, general purpose computers and avionics and electronic systems on most aircraft. In addition, the center has worldwide management and engineering responsibility for the U-2 Dragon Lady and performs Global Reach Improvement Program aircraft modifications and systems sustainment support on the C-17 Globemaster through a partnership agreement with the Boeing Co.

The center supports fire-fighting equipment and vehicles of all types and is the technology repair center for life-support equipment, instruments (gyroscopes), and airborne electronics and aircraft propellers.

WR-ALC manages more than 200,000 items representing the full range of avionics functions and technology. These items include aerospace communications and navigation equipment, airborne bomb and gun-directed systems, target acquisition systems and most Air Force airborne electronic warfare equipment. The center provides cradle-to-grave management support for the low-altitude navigational targeting infrared for night (LANTIRN) system, the joint tactical information distribution system and the worldwide military command and control system.

The center is also responsible for procurement, supply and maintenance functions for most Air Force bases along the East Coast, as well as the Atlantic Missile Test Range, New Foundland, Labrador, Greenland, Iceland, Bermuda, the Azores and all Air Force and Security Assistance Program activities in Europe, Africa and the Middle East.

Weapon systems
F-15 Eagle, C-130 Hercules, C-5 Galaxy, U-2 Dragon Lady, C-17 Globemaster III, utility aircraft, Air Force helicopters, including the MH-53 Pave Low III variants, HH-60 Pave Hawk, UH-1N Huey, and Air Force missiles, including sustainment support for tactical missiles and associated launchers, as well as sub-scale aerial targets, including AIM-7 Sparrow, AIM-9 Sidewinder, AIM-120 Advanced Medium Range Air-to-Air Missile (AMRAAM), AGM-88 High Speed Anti-Radiation Missile (HARM), FIM-92 Stinger, BQM-34 Firebee and MQM-107 Streaker. WR-ALC is also responsible for 73 Air Force weapon systems, including all gun systems and bomb rack/release systems, as well as Global Positioning System user equipment, and the Joint Surveillance Target Attack Radar System (Joint STARS).

Budget
$12.6 billion

Additional tenants
Headquarters Air Force Reserve Command
5th Combat Communications Group (ACC)
367th Air Force Recruiting Group
116th Air Control Wing
19th Air Refueling Group (AMC)
Defense Reutilization and Marketing Office

Geographically Separated Units:
Det. 3, Air Force Petroleum Office, Ft. Belvoir, Va.
U-2 Flight Test Det. 2, Palmdale, Calif.
Det. 1, Air Force Metrology & Calibration, Heath, Ohio

Contact information:
www.robins.af.mil or call 478-926-1110 or DSN 468-1110

Tinker Air Force Base, Okla.

Host unit
72nd Air Base Wing

Primary AFMC tenant
Oklahoma City Air Logistics Center

Mission
The OC-ALC provides specialized logistics support, management, maintenance and distribution for weapon systems worldwide.

Responsibilities
The center repairs and maintains a variety of aircraft, including bombers, refuelers and reconnaissance aircraft.

Many crucial airborne accessories are also maintained at the center, including life-support systems such as oxygen equipment and ejection seats. The center provides cradle-to-grave support for a variety of aircraft including the E-3 AWACS, C/KC-135, B-52 and B-1. The OC-ALC manages and maintains a $31.2-billion inventory of more than 22,000 engines.

High atop a Texas Tower platform surrounding an E-3 Sentry in Bldg. 230, Maintenance Directorate mechanics keep a roto dome steady while a crane slowly lifts the saucer from its struts and lowers it to a stand on the ground. The metal platform gives mechanics safer access to the dome area for bearing changes, corrosion inspection and other depot maintenance. (AF photo by Margo Wright)

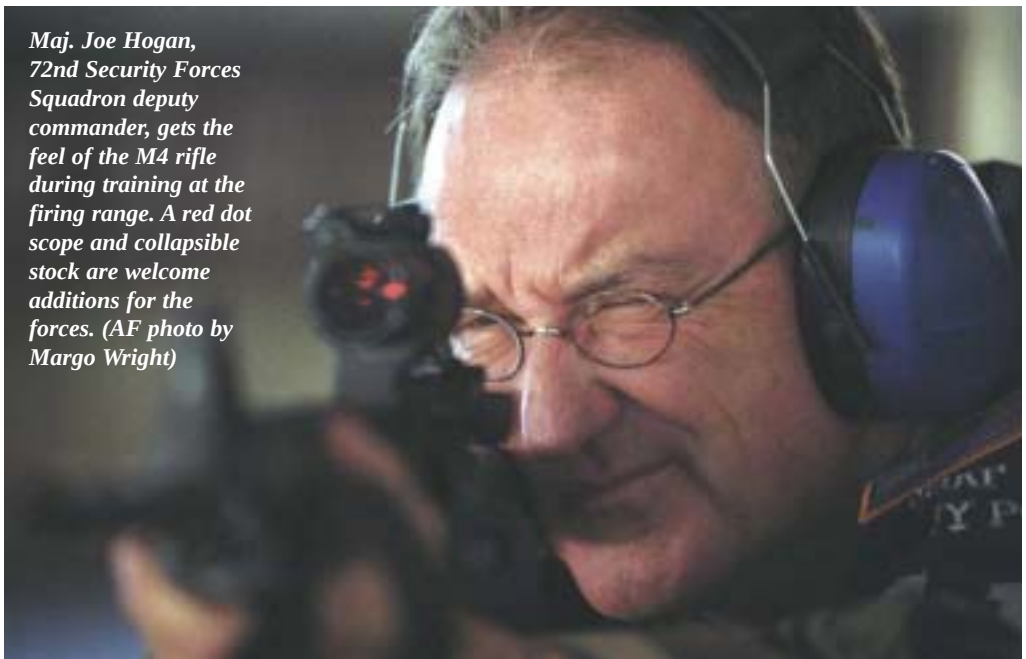
The center is also responsible for more than 1,800 missiles and 24,800 accessories, which support thousands of aircraft, including Air Force One. It is responsible for depot-level repair, modifications, overhaul and functional check flight of the B-1, B-52, C/KC-135, E-3 and the Navy's E-6 aircraft. Engines managed included the F100, F101, F108, F110, F118, TF30, TF33, TF34, TF39, TF41, T400, T700, J33, J57, J69, J75, J85, J56, T64 aircraft engines and the F107 and F112 missile engines. The center's airborne accessories workload includes hydraulics, oxygen equipment, fuel accessories, bearings and life support equipment among other items.

Weapon systems
Aircraft include the B-1B, B-2, KC-10, E-3, E-6, B-52 and C/KC-135.
The center provides contractor logistics support for commercial-derivative aircraft, including airlift, tanker and presidential aircraft.
Missile systems managed by the OC-ALC include the air-launched cruise missile, conventional air-launched cruise missile, advanced cruise missiles, harpoon and bomber weapons integration equipment.

Budget
$12.8 billion

Additional tenants
552nd Air Control Wing;
507th Air Refueling Wing;
38th Engineering Installation Group;
3rd Combat Communications Group;
Navy Strategic Communications Wing ONE;
Defense Logistics Agency; and the Defense Information System Agency Defense Enterprise Computing Center — Oklahoma City.

Contact information
www.tinker.af.mil or call 405-732-7321 or DSN 884-1110



Maj. Joe Hogan, 72nd Security Forces Squadron deputy commander, gets the feel of the M4 rifle during training at the firing range. A red dot scope and collapsible stock are welcome additions for the forces. (AF photo by Margo Wright)

Wright-Patterson Air Force Base, Ohio

Host unit
88th Air Base Wing

Primary AFMC tenant
Aeronautical Systems Center

Mission
To rapidly develop, acquire, modernize and sustain the world's best aerospace systems

Responsibilities
The center arms the warfighter with world-class weapon systems, enabling combat aerospace forces to ensure global vigilance, reach and power. Its acquisition work force and support units deliver combat capabilities to the warfighter, which meet performance, cost and schedule expectations. ASC's major acquisition programs include fighter, bomber, transport, reconnaissance and trainer weapon systems.

The U-2 "Dragon Lady" has been upgraded with more than $1.7 billion in new avionics, engines and sensors at regular intervals throughout its 48-year lifespan. ASC's Aeronautical Enterprise Program Office deals with issues across several types of aging platforms, such as replacing obsolete parts for viable combat avionics, aging wiring and corrosion effects on structural integrity as well as corrosion protection. (AF photo)

Weapon systems
The ASC work force sustains aging systems like the F-15, F-16, F-117, B-1, B-2 and B-52; delivers cutting-edge replacement systems like the C-17, Predator and Global Hawk unmanned aerial vehicles, F/A-22, F-35 Joint Strike Fighter; and develops tomorrow's weapon systems, like the unmanned combat aerial vehicle and airborne laser; to provide future strike, airlift and space-access capabilities.

Budget
$18 billion

Additional tenants
Headquarters Air Force Materiel Command
Air Force Institute of Technology
U.S. Air Force Museum
Headquarters Air Force Research Laboratory
445th Airlift Wing
Air Force Security Assistance Center and National Air Intelligence Center

Contact information
www.wpafb.af.mil or call 937-257-1110 or DSN 787-1110

A Global Hawk unmanned aerial vehicle lands after a demonstration sortie. While still in its developmental phase, Global Hawk supported Operation Enduring Freedom in Afghanistan, flying more than 1,000 hours and taking more than 15,000 high-resolution images. The highly capable system was rapidly fielded by the acquisition work force at ASC to support operators in the field. (AF photo)

Dr. Morley O. Stone, a scientist from the Materials and Manufacturing Directorate's Survivability and Sensor Materials Division Hardened Materials Branch, examines a tube of green fluorescent protein. (AF photo)

Air Force Research Laboratory

Mission

Leading the discovery, development and integration of affordable warfighting technologies for our air and space force.

Responsibilities

The laboratory pioneers new capabilities for warfighters while developing the innovations for dealing with future challenges. AFRL leverages its technological information to offer potential solutions to warfighter needs for technologies, providing them rapid response capabilities.

Budget

$1.7 billion plus $1.3 billion from the laboratory's customers

Contact information

www.afrl.af.mil or call 937-904-9851

AFRL directorates:

Air Force Office of Scientific Research

Headquartered in Arlington, Va., AFOSR manages the Air Force's investment in basic research. They invest in research in aerospace related science and engineering and exploit revolutionary scientific breakthroughs. AFOSR-supported research has contributed to many significant technical accomplishments, including the laser, precision munitions, stealth aircraft and the computer mouse.

Air Vehicles Directorate

Headquartered at Wright-Patterson AFB, Ohio, Air Vehicles directorate develops and transitions technological solutions for military aerospace vehicles. The emphasis is on technology development supporting cost-effective, survivable aerospace vehicles capable of accurate and quick delivery of a variety of future weapons or cargo.

Directed Energy Directorate

Headquartered at Kirtland AFB, N.M., Directed Energy develops, integrates and transitions science and technology for directed energy to include high-powered microwaves, lasers, adaptive optics, imaging and effects to assure the pre-eminence of the United States in air and space. Its people provide research and development for leading edge space capabilities. The Starfire Optical Range team conducts research in advanced tracking, adaptive optics, atmospheric physics and imaging of objects in space using telescopes.

Human Effectiveness Directorate

Human Effectiveness' mission is to provide science and leading-edge technology to define human capabilities, vulnerabilities and effectiveness; train warriors; integrate operators and weapons systems; protect Air Force people, and sustain aerospace operations around the world.

An AFRL fire technician, fights a flowing JP-8 fuel fire to test the effectiveness of fire-fighting equipment on a simulated engine nacelle at Tyndall AFB, Fla. (AF photo)

(Top and bottom) Air vehicles directorate personnel are working technologies for a new multi-role tanker/transport configuration that will have the ability to accompany the strike package into theater, support austere operations, and transport a combat ready team. (Graphics courtesy of Lockheed-Martin (top) and Boeing)

Information Directorate

Headquartered at Rome, N.Y., this directorate develops information technologies for aerospace command and control, and its transition to air, space and ground systems. Focus areas include a broad spectrum of technologies, including information fusion and exploitation, communications and networking, collaborative environments, modeling and simulations, information assurance and defensive information warfare and intelligence information systems technologies.

Materials and Manufacturing Directorate

Headquartered at Wright-Patterson AFB, with an additional research facility at Tyndall AFB, Fla., Materials and Manufacturing develops materials, processes and advanced manufacturing technologies for aircraft, spacecraft, missiles, rockets and ground-based systems and their structural, electronic and optical components. Their research includes revolutionary nanoscale and biotechnologies, and computational materials science to achieve unprecedented levels of performance in new materials.

Munitions Directorate

Headquartered at Eglin AFB, Fla., Munitions integrates and transitions science and technology for air-launched munitions for defeating ground, air and space targets. Its people conduct basic research, exploratory development and advanced development and demonstrations.

Propulsion Directorate

Headquartered at Wright-Patterson AFB, with an additional facility at Edwards AFB, Calif., this directorate develops air and space vehicle propulsion and power technologies. Focus areas include turbine and rocket engines, advanced propulsion systems and associated fuels and propellants for all propulsion systems.

Sensors Directorate

Headquartered at Wright-Patterson AFB, with additional research facilities at Hanscom AFB, Mass., and Rome, N.Y., Sensors develops the new technologies to find and precisely engage the enemy and eliminate the ability to hide or threaten our forces. In collaboration with other directorates and Defense Department organizations, the directorate develops sensors for air and space reconnaissance, surveillance, precision engagement ant electronic warfare systems. They also produce sensor and countermeasure technology.

Space Vehicles Directorate

Headquartered at Kirtland AFB, with an additional research facility at Hanscom AFB, Space Vehicles develops and transitions space technologies for more effective, more affordable warfighter missions. Primary focus areas are radiation-hardened electronics, space power, space structures and control, space-based sensing, space environmental effects, autonomous maneuvering and balloon and satellite flight experiments.

A subject being scanned with a 3-D body digitizer. The information collected will help the Air Force achieve full capability of weapon systems with accurate fit and accommodation. (AF photo)

Air Force Security Assistance Center

The Air Force Security Assistance Center oversees system sales and support for more than 170 models of aircraft like this F-5. (AF photo)

Mission

AFSAC provides materiel and services to support the security of the United States and our allies.

Responsibilities

AFSAC oversees system sales and support for more than 170 models of aircraft — a fleet that totals over 6,600. AFSAC oversees AFMC product and logistic center support of support security assistance needs to 103 countries and seven NATO organizations, totaling 110 customers.

The center serves as a 'portfolio manager' for foreign military sales within each country and the command. AFSAC still supports logistics for the vintage C-47, which is still flying, to the advanced Boeing 767 Airborne Warning and Control System and the F-35 Joint Strike Fighter. Two unique roles are the Command Country Manager and Case Manager. The CCM serves as the director for a country's FMS portfolio, integrating country activities and overall financial picture. CCMs exist in the Global Management Directorate and serve as the single face to our customers.

The CM serves as the single face to the suppliers, internal and external, and is dedicated toward developing and executing the details of FMS cases, while maintaining the case file. CMs are organized by process or product and are located in the Case Operations Directorate — the largest in AFSAC. Additionally, as a result of the FMS oversight responsibility, AFSAC personnel help ensure the command's international business processes comply with the Air Force policy and the Arms Export Control Act.

Weapon systems

AFSAC supports the following aircraft and weapons systems worldwide: C-47, A-37, T-33, T-37, C-7, T-38, A-7, F-104, C-130, F-111, F-4, F-5, Boeing 707, F-16, F-15, E-3, KC-135, AWACS 767, KC-767, C-17, F-35 Joint Strike Fighter; AMRAAM, Sidewinder, Sparrow, and Maverick missiles; Joint Direct Attack Munition, Paveway Guided Bombs, LANTIRN Targeting Pods, night vision goggles, target drones, unmanned aerial vehicles, Ground Approach and Surveillance Radars and the Forward-Looking Infrared Radar.

Contact information

https://www.afsac.wpafb.af.mil or call 937-257-2552 or DSN 787-2552

AFSAC supports many weapon systems, including Greek F-15s. (AF photo)

An AMARC technician performs maintenance on an active-duty A-10 Thunderbolt. (AF photo)

Aerospace Maintenance and Regeneration Center

Mission

AMARC, located at Davis-Monthan AFB, Ariz., provides aerospace maintenance and asset regeneration for warfighter sustainment.

Responsibilities

AMARC provides time-critical aircraft and aircraft parts to support warfighting operations.

Today, its mission includes the storage of more than 4,300 aircraft, the reclamation of millions of dollars worth of parts and the regeneration of aircraft for operational use by our forces and for sales to our allies.

AMARC provides airframe structural repair, non-destructive testing, avionics repair, pneudraulics overhaul, power plant repair, and egress and armament systems inspections.

In support of the Air Combat Command, AMARC continues to regenerate and successfully deliver F-4 aircraft for the full-scale aerial target program. AMARC also stores and manages more than 400,000 line items of production tooling and special test equipment for future use in support of B-2, B-1B, A-10, C-5, C-141, F-4 and EA-6B aircraft. This center also supports specialized training efforts of the Air Force's aircraft battle damage repair and crash-damaged recovery teams, as well as the Defense Department and other federal agencies.

Budget

$78.5 million

Contact information

www.dm.af.mil/amarc/index.html or call 520-228-8001 or DSN 228-8001

AMARC technicians disassembled, wrapped and shipped this F-16 Fighting Falcon fuselage to Hill AFB, Utah. (AF photo)

Standard Systems Group

Mission

Headquarters Standard Systems Group provides and supports secure combat support information systems and networks for the Air Force and Defense Department components.

Responsibilities

Located as a tenant organization on Maxwell Air Force Base, Gunter Annex, Ala., SSG is a component of Electronic Systems Center at Hanscom AFB, Mass. The group's core competencies include: IT systems acquisition program management; combat support domain expertise; information technology insertion in business processes; network operations support and security; and commercial IT product and service acquisition. SSG designs, builds or buys, installs and supports information systems.

U.S. Army personnel load a HumVee on board a U.S. Air Reserve Command C-130 Hercules. Every day, the Air Force moves tens of thousands of pieces of equipment and people, and keeps track of when and where problems may arise. The Cargo Movement Operations System (CMOS) uses computer software and tracking equipment to constantly keep track of all military cargo en route to its destination. (AF photo by Maj. Jerry Lobb)

Within SSG, five information system program offices support the operational Air Force via 61 information systems across the combat support arena, including maintenance, transportation, supply, munitions, contracting, finance, medical and operations. SSG's Field Assistance Branch (FAB) provides a 24-hour, 7-day a week point of contact for all computer system service calls supporting more than 100 Air Force standard data systems worldwide.

SSG also manages the Air Force's network operations to the service delivery point at every Air Force location. The Air Force Network Operation Center (AFNOC) provides 24-hour, 7-day a week enterprise-wide network operation, and command, control, communications and computer (C4) situational awareness for the major commands and the Air Force. SSG provides the contractual vehicles used throughout the Air Force to acquire commercial off-the-shelf hardware, software and services at great prices used by virtually every organization on bases worldwide. SSG also heads up the Air Force Information Technology Commodity Council. This AFITCC develops Air Force-wide strategies for buying and managing information technology products.

Budget

$309 million

Contact information

https://web1.ssg.gunter.af.mil or call (334) 416-4319/4324 or DSN 596-4319/4324

Munitions system specialists build a precision-guided Joint Direct Attack Munition in support of the November 2003 "Iron Flag" exercise at Beal AFB, Calif. The Combat Ammunition System's complete round capabilities assist Ammo troops with the assembly of live munitions in support of contingencies at a bare-base location. (AF photo by Tech. Sgt. Richard Sipocz)

Materiel Systems Group

Mission

Acquiring, developing, maintaining, re-engineering and providing technical services for information systems.

Responsibilities

MSG has extended its business model by developing an in-house rapid prototyping capability. Utilizing the latest information technologies to provide a quick turn-around of requirements, this capability builds prototypes on an infrastructure that represents both existing and planned Air Force environments.

MSG specializes in integrated weapon system support solutions for both depot-level and field operations requirements, providing multi-functional information management systems, or the latest in IT technology support solutions such as enterprise data warehousing and e-commerce. We work with our customers to plan, acquire, manage, deploy, sustain and upgrade over 140 IT systems.

Budget

$382.5 million

Contact information

Toll free 1-866-360-2800 or 937-257-4499

Airmen work on the EMC Storage Area Network. (AF photo)

Command demographics

Compiled by Tech. Sgt. Orren C. Bradley III and Karen Muterspaw, AFMC personnel

Each base listing is followed by its host unit in bold type.

Figures in the table are for assigned personnel, a term for the actual number of people on the job. This is not the same as manpower authorizations, a term for the total number of positions with approved funding.

Figures are current as of March 1, 2004.

AVERAGE AGE

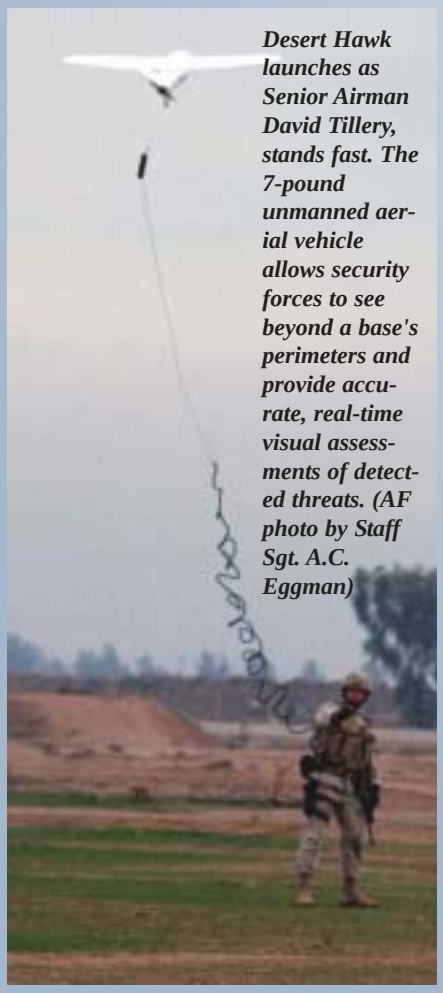
	AFMC	AF
Officer	35	35
Enlisted	28	29
Civilian	50	46

GENDER

	MALE	FEMALE
Officer	80%	20%
Enlisted	78%	22%
Civilian	66%	34%

EDUCATION (combined)

High school +	37%
Bachelor's	42%
Master's	20%
Doctorate	.9%
Other	.8%



Desert Hawk launches as Senior Airman David Tillery, stands fast. The 7-pound unmanned aerial vehicle allows security forces to see beyond a base's perimeters and provide accurate, real-time visual assessments of detected threats. (AF photo by Staff Sgt. A.C. Eggman)

BASE	OFFICER	ENLISTED	CIVILIAN	TOTAL
ARNOLD AFB, Tenn.				
Arnold Engineering Development Center	55	40	188	283
BROOKS City-Base, Texas				
311th Air Base Wing	91	242	372	705
AF Research Lab (Super Lab)	51	38	101	190
Aeronautical Systems Center (ASC)	250	295	212	757
Personnel located at Robins AFB, Ga.	0	0	38	38
EDWARDS AFB, Calif.				
95th Air Base Wing	181	665	710	1,556
AF Flight Test Center	415	1,876	2,123	4,414
AF Research Lab (Super Lab)	27	19	173	219
Aeronautical Systems Center (ASC)	11	26	1	38
Personnel located at Robins AFB, Ga.	3	6	0	9
EGLIN AFB, Fla.				
96th Air Base Wing	364	1,988	1,176	3,528
Air Armament Center	380	1,371	1,442	3,193
AF Research Lab (Super Lab)	64	12	292	368
Aeronautical Systems Center (ASC)	4	0	4	8
Personnel located at Hanscom AFB, Mass.	3	0	0	3
Persoonnel located at HQ AFMC, Ohio	5	5	2	12
HANSCOM AFB, Mass.				
66thAir Base Wing	70	281	312	663
Electronic Systems Center	729	218	748	1,695
AF Research Lab (Super Lab)	127	41	263	431
Aeronautical Systems Center (ASC)	2	0	1	3
Personnel located at Eglin AFB, Fla.	4	1	2	7
HILL AFB, Utah				
75thAir Base Wing	162	1,037	1,026	2,225
Ogden Air Logistics Center	323	672	9,368	10,363
AF Research Lab (Super Lab)	3	0	8	11
Personnel located at Eglin AFB, Fla.	0	0	1	1
Personnel located at Hanscom AFB, Mass.	3	0	66	69
KIRTLAND AFB, N.M.				
377thAir Base Wing	172	841	651	1,664
AF Research Lab (Super Lab)	186	64	586	836
Aeronautical Systems Center (ASC)	51	7	44	102
Personnel located at Edwards AFB, Calif.	1	40	0	41
Personnel located at Eglin AFB, Fla.	9	161	64	234
Personnel located at Hanscom AFB, Mass.	1	0	0	1
Personnel located at Hill AFB, Utah	0	0	2	2
Personnel located at HQ AFMC FOA	9	0	17	26
ROBINS AFB, Ga.				
78thAir Base Wing	153	1,295	1,002	2450
Warner-Robins Air Logistics Center	263	511	9,707	10,481
AF Research Lab (Super Lab)	2	2	4	8
Aeronautical Systems Center (ASC)	0	4	0	4
Personnel located at Edwards AFB, Calif.	4	10	2	16
TINKER AFB, Okla.				
72nd Air Base Wing	146	763	699	1,608
Oklahoma City Air Logistics Center	234	290	12,049	12,573
AF Research Lab (Super Lab)	2	2	5	9
Aeronautical Systems Center (ASC)	2	0	1	3
Personnel assigned to Edwards AFB, Calif.	0	9	6	15
Personnel assigned to Hanscom AFB, Mass.	2	13	471	486

(Left) Christopher Wells installs an afterburner spray-bar on a J79-GE-17 engine. (Right) Staff Sgt. Marco Carter marks off his checklist, while Airman 1st Class Stephanie Garza inspects an Air-to-Ground Missile 65 prior to loading it on an A-10. Evaluator Staff Sgt. John Hill watches the team as the Dragons (in background) make final checks after finishing their load. (AF photos)

BASE	OFFICER	ENLISTED	CIVILIAN	TOTAL
WRIGHT-PATTERSON AFB, Ohio				
88th Air Base Wing	92	656	1,479	2,227
AF Research Lab (Super Lab)	397	32	1,810	2,239
Aeronautical Systems Center (ASC)	1,211	990	3,073	5,274
Edwards AFB, Calif.	1	1	37	39
Eglin AFB, Fla.	0	0	17	17
Hanscom AFB, Mass.	15	15	440	470
Hill AFB, Utah	0	0	1	1
Robins AFB, Ga.	6	13	27	46
HQ AFMC	286	153	964	1,403
HQ AFMC-FOA	56	121	223	400
AF Security Assistance Center (AFSAC)	21	2	330	353
AF Museum	0	0	97	97
AFMC personnel located at non-AFMC locations and the organization they are from:				
AF Research Lab (Super Lab)	102	25	956	1,083
Aeronautical System Center (ASC)	85	111	32	228
AF Security Assistance Center	0	0	5	5
HQ AFMC	10	0	29	39
HQ AFMC FOA	0	0	6	6
Arnold AFB, Tenn.	0	0	16	16
Davis-Monthan AFB, Ariz.	4	0	533	537
Edwards AFB, Calif.	15	24	29	68
Eglin AFB, Fla.	80	145	229	454
Hanscom AFB, Mass.	276	1,009	1,092	2,377
Hill AFB, Utah	6	107	235	348
Robins AFB, Ga.	8	19	167	194
Tinker AFB, Okla.	1	1	25	27

Air National Guard (AFMC) Unit	OFFICER	ENLISTED	TOTAL
130th EIS Salt Lake City, Utah	10	115	125
202nd EIS Macon, Ga.	9	132	141
205th EIS Oklahoma City, Okla.	10	141	151
210th EIS Minneapolis, Minn.	7	103	110
211th EIS Indiantown Gap, Penn.	8	112	120
212th EIS Milford, Mass.	9	104	113
213th EIS Stewart ANGB, N.Y.	8	100	108
214th EIS New Orleans, La.	8	116	124
215th EIS Everett, Wash.	8	123	131
216th EIS Hayward, Calif.	9	103	112
217th EIS Springfield, Ill.	7	112	119
218th EIS St. Louis, Mo.	10	118	128
219th EIS Tulsa, Okla.	9	106	115
220th EIS Zanesville, Ohio	10	116	126
241st EIS Chattanooga, Tenn.	9	112	121
243rd EIS South Portland, Maine	8	124	132
270th EIS Willow Grove, Pa.	9	104	113
272nd EIS La Porte, Texas	9	97	106
273rd EIS Beaumont, Texas	8	100	108

Air Force Reserve (AFMC) Unit	OFFICER	ENLISTED	TOTAL
Arnold AFB, Tenn.	7	1	8
Brooks City-Base, Texas	0	0	0
Davis-Monthan AFB, Ariz.	10	5	15
Edwards AFB, Calif.	54	69	123
Eglin AFB, Fla.	70	129	199
Hanscom AFB, Mass.	109	51	160
Hill AFB, Utah	112	306	418
Robins AFB, Ga.	99	197	296
Tinker AFB, Okla.	88	138	226
Wright-Patterson AFB, Ohio	90	27	117
ASC, Air Force-wide	207	66	273
AFRL, Air Force-wide	183	5	188

A Predator's many faces

from supporting the warfighter to being the warfighter

Joel Fortner
AFMC Public Affairs

High above Afghanistan, Predators are airborne every hour of the day, every day of the week over targeted areas where terrorists may be hiding out.

The constantly evolving Predator unmanned aerial vehicle is playing a major role in the Global War on Terrorism in Afghanistan and Iraq. Originally designed to provide intelligence information to the warfighter as the RQ-1, the Predator still conducts this primary mission, but the newly designed MQ-1L multi-mission variant, capable of employing two AGM-114 Hellfire missiles, is also being used to increase force protection measures by protecting coalition helicopters against rocket-propelled grenade attacks.

The MQ-1L variant underwent improvements to increase reliability and maintainability since demand on the system has increased during the war on terrorism, allowing the Predator system to spend more time doing what it does best — maintaining long loiter times and providing persistent surveillance capabilities to the component commanders. Improvements included switching the engine from carburetors to fuel injection, adding dual alternators and upgrading the electro-mechanical system.

Recently, a MQ-1L Predator Technical Order team led by the 645th Materiel Squadron, Detachment 3, San Diego, Calif., and made up of members of Air Force Materiel Command, Air Combat Command and the contractor (General Atomics Aeronautical Systems, Inc.), put the final touches on the improvement process by verifying nearly 10,000 pages of data in 90 days — the formal Air Force Technical Orders required for warfighters to properly operate and maintain the improved system.

I see you

The RQ-1 is the initial variant of the Predator. It is strictly an intelligence, surveillance and reconnaissance (ISR) platform. (AF photo)

Bigger brother

The MQ-9 AC3 Predator B is the "big brother" to the Predator A, flying higher and faster while carrying more payload. It is a multi-mission platform capable of performing an ISR mission and employing armaments. (AF photo)

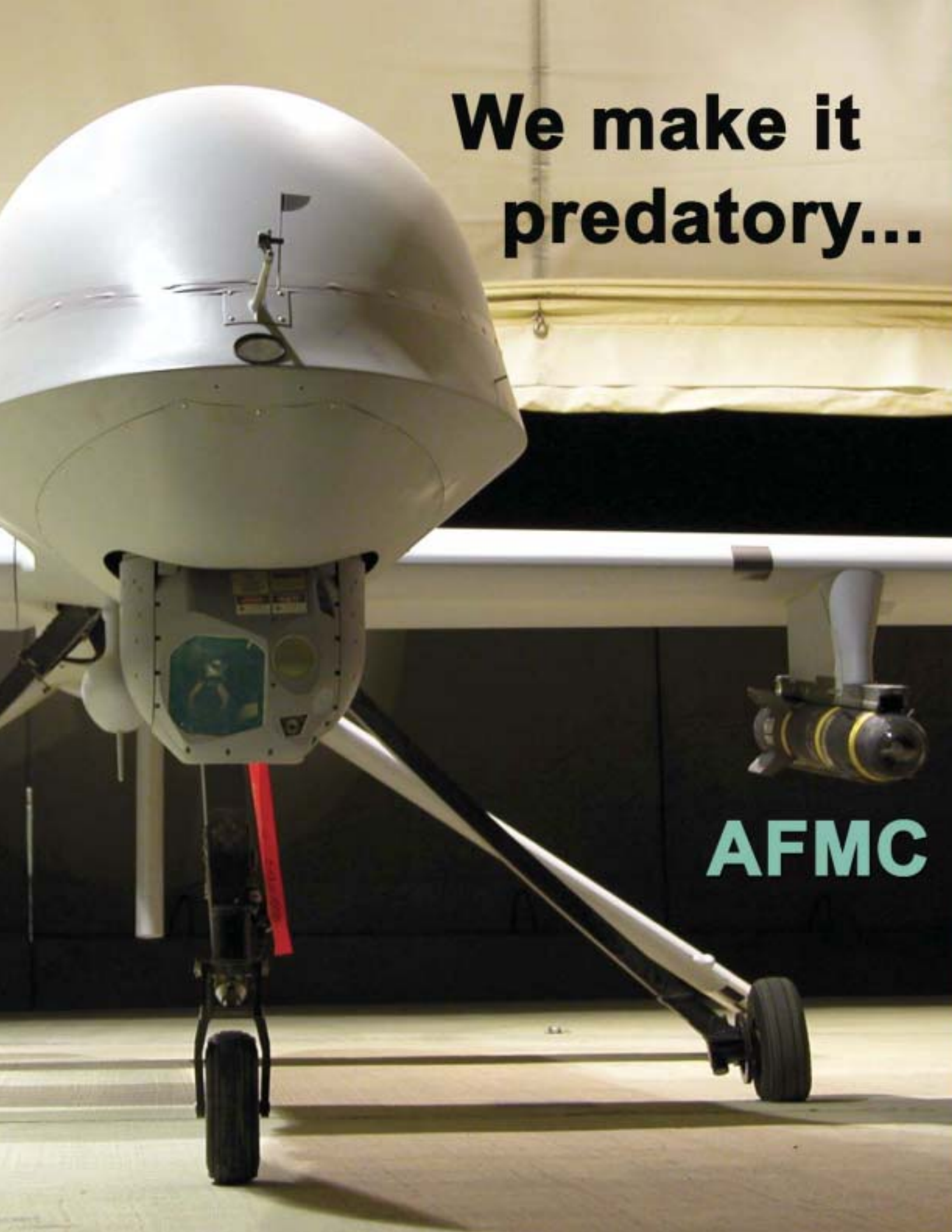
Maintenance workers perform last minute preflight checks on an RQ-1 Predator before a mission at a forward-deployed location. AFMC personnel have played key roles in every stage of the Predator unmanned aerial vehicle program. (AF photo by Staff Sgt. Jeremy T. Lock)

Eye on terror

Beefing up the Predator for the war on terrorism, the MQ-1L Predator Technical Order team verified nearly 10,000 pages of data in 90 days to support Predator system improvements. (AF photo)

Sight and fight

MQ-1L is the multi-mission variant, capable of employing two AGM-114 Hellfire missiles. (AF photo)


We make it
predatory...
AFMC